

# Digital Multi-Day Soil Thermometer Installation

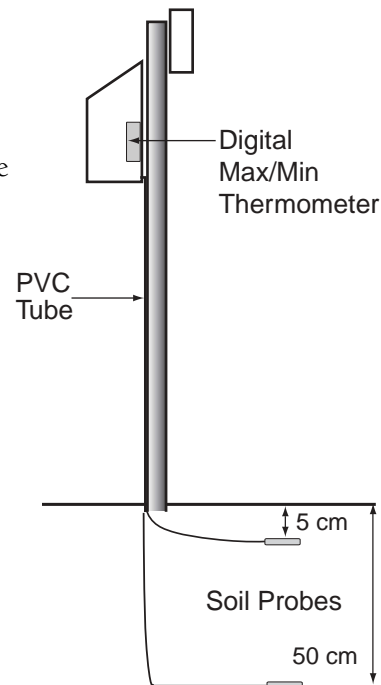
## Field Guide

### Task

Install the digital soil thermometer at your atmosphere or soil moisture study site.

### What You Need

- ☐ Drill with 12 mm spade bit
- ☐ Digging tools
- ☐ String or wire ties
- ☐ GLOBE instrument shelter (specifications are given in the *GLOBE Instrument List* in the *Toolkit*)
- ☐ 120 cm length of 2.5 cm diameter PVC pipe (optional)
- ☐ Two pieces of tape
- ☐ A writing instrument



**Note:** If you are going to be using another digital multi-day thermometer to take air and 10 cm depth soil measurements, try to bury the 5 cm and 50 cm soil probes as close as possible to the 10 cm probe from the other thermometer. If you have not installed that 10 cm probe, this would be a good opportunity to bury all the soil probes in the same hole.

### In the Field

1. Mount the digital thermometer housing to the rear wall of your instrument shelter. The housing should be placed so that the digital display may be read easily. If you are out of room on the rear wall, the housing may be left unmounted, lying on the bottom of the shelter.
2. Use two pieces of tape to label the left probe as '5 cm', and the right probe as '50 cm'. Be sure not to stick the tape to the metal tips of the probes.
3. If necessary drill a 12 mm hole, using a drill with a spade bit, in the bottom of the instrument shelter, near the back. Feed the sensor probes through the hole, leaving as much cable as possible inside the shelter. You may wish to feed the sensors through a PVC pipe that will then serve to protect the wires.
4. Bury the probes nearby on the equatorward side (sunny-side) of the instrument shelter mounting post. Data collected from soil in unshaded locations are preferred. Comments in your site definition should include the amount of shade that the soil surface above the probes will experience during a year.

5. Dig a hole to a depth of a little over 50 cm at the chosen location.
6. Push the probe labeled '5 cm' horizontally into the side of the hole at a depth of 5 cm. If needed, use a nail or steel pin, with a slightly smaller diameter than the probe, to pilot an opening for the probe.
7. Push the probe labeled '50 cm' horizontally into the side of the hole at a depth of 50 cm. Again, if necessary, use a nail or steel pin to pilot an opening for the probe.
8. Refill the hole with the soil that you removed (last out, first in).
9. Neatly secure all extra cable using string or wire ties. Keep as much of the excess cable as possible within the shelter.